

NOTES

TWO NEW RUSHES (*JUNCUS*, JUNCACEAE) FROM CHIAPAS, MEXICO

This note describes a new species and a new variety of *Juncus* from the state of Chiapas in Mexico.

Juncus chiapasensis Balslev, sp. nov. TYPE: Mexico. Chiapas: Lagunas de Montebello near Guatemala border, 30 km (air) E of La Trinitaria, 1,200 m, *Roe, Roe & Mori* 966 (holotype, DS-584358; isotypes, F, WIS). Figure 1A, B.

Planta perennis, caespitosa; folia linearia, teretia, septata; inflorescentia anthela, 10–20 × 5–12 cm, 8–17-capitulata; capitula 10–35-flora; tepala 2.5–3 mm longa, castanea; stamina 3, 1.8–2.5 mm longa; capsula 4–4.5 × 1–1.2 mm, obclavata, castanea, tepalis longior.

Perennial, caespitose herbs 60–90 cm tall. Rhizome 3 mm diam. Culms erect, 2–3 mm diam., terete, smooth or finely striate. Basal sheathing bladeless leaves absent or one to each culm, up to 7 cm long. Foliar leaves 1–2 basal and 1–2 cauline to each culm, 10–45 cm long; sheaths 4–8 cm long with membranaceous margins, terminally biauriculate, the auricles 2–3 mm long and rounded; blades 1.5–3 mm diam., round in cross section, conspicuously cross septate. Inflorescence a decompound anthela, 10–20 × 5–12 cm, of 8–17 flower heads, these globose, 10–13 mm diam., 10–35 flowered, castaneous, the ultimate head-bearing branches ca. 0.5 mm thick. Lower inflorescence bract 3–7 cm long, much shorter than the inflorescence, resembling basal and cauline leaves; upper bracts progressively shorter, the floral bracts acuminate, ca. 0.2 mm long, membranaceous. Tepals subequal, 2.5–3 mm long, lanceolate, acute, the outer ones V-shaped in cross section, the inner ones flat. Stamens three, 1.8–2.5 mm long; filaments linear; anthers oblong,

0.6–0.8 mm long, about half as long as the filaments. Capsule 4–4.5 × 1–1.2 mm, conspicuously longer than the tepals, obclavate, trigonous, acute, gradually tapering towards the apex, castaneous, unilocular. Seeds 1 × 0.2 mm, ellipsoid, apiculate, reticulate, yellow-brown, with a thick, hyaline outer seed coat.

This new species is known only from a few localities in the state of Chiapas, Mexico, near the Guatemalan border. It has been collected at elevations of 1,200–2,200 meters in marshes along lake shores. It belongs to *Juncus* subg. *Septati* Buchenau (1875), as evidenced by its terete, hollow, and cross-septate leaf blades. This subgenus, with some 80 species distributed worldwide, is the largest in the genus. In the neotropical region, some 15 species belong to subg. *Septati*. The inflorescence of this new species is also typical of that subgenus: the flowers are congested into heads arranged in an anthela of which the proximal branches overtop the distal branches. *Juncus chiapasensis* differs from the closely related *J. guadeloupensis* Buchenau by having globose flower heads and obclavate, castaneous capsules much longer than the tepals. *Juncus guadeloupensis* has golden brown capsules and is endemic to the Caribbean island of Guadeloupe. *Juncus debilis* A. Gray likewise occurs in Chiapas and has longer capsules than tepals, but it is much smaller than *J. chiapasensis* in all dimensions.

Additional specimens examined. MEXICO. CHIAPAS: La Trinitaria, Lagunas de Montebello, 1,300 m, *Breedlove & Thorne* 21247 (DS); San Cristóbal valley, 2,200 m, *Breedlove & Thorne* 21285 (DS, mixed with *J. ebracteatus* E. Meyer; MICH).



FIGURE 1. A, B. *Juncus chiapasensis* (Roe, Roe & Mori 966).—A. Habit.—B. Flower with protruding capsule. C, D. *Juncus liebmannii* var. *polycephalus* (Breedlove 15065).—C. Habit.—D. Flower with capsule and floral bract.

Juncus liebmannii Macbride, Field Mus. Nat. Hist., Bot. Ser. 11(1): 9. 1931 (as *J. liebmannii*). Replaced synonym: *Juncus brevifolius* Liebm. (1850), non Hoffsgg. & Link in Rostkov (1801).

This species has one variety in the Andes of Ecuador and Colombia (var. *quitensis* (Buchenau) Balslev, 1979), and two varieties in Mexico and Central America, one of which is described here as new. *Juncus liebmannii* was first collected in Puebla, Mexico by Liebmann in 1841 and described as *J. brevifolius* (Liebmann, 1850). Liebmann was aware that Hoffmannsegg & Link in Rostkov (1801) had used the name *J. brevifolius* before, but since the entity bearing the first application of the name was a synonym of a species of *Luzula*, he felt free to use the name again for a species of *Juncus*. This was accepted by Buchenau (1873, 1886, 1890, 1906), who called the typical variety *J. brevifolius* var. *mexicanus*. Macbride (1931) renamed the species according to current nomenclatural rules.

Juncus liebmannii Macbride var. **polycephalus** Balslev, var. nov. TYPE: Mexico. Chiapas: southern city limits of Tepisca, 1,800 m, *Breedlove 15065* (holotype, DS-609015; isotypes, MICH, NY). Figure 1C, D.

Planta perennis; rhizoma repens, internodiis 1 cm longis. Folia linearia, teretia vel aliquantum compressa, septata; auriculae involutae; inflorescentia anthela 3–8 × 2–4 cm, 10–30-capitulata; capitula 4–6 mm lata, 10–15-flora.

Perennial herbs 60–70 cm tall. Rhizome horizontally creeping, 2–3 mm diam. Culms erect, 1–2 mm diam., terete, finely striate. Cataphylls 1–2 to each culm, up to 12 cm long. Foliar leaves 2–3 to each culm, inserted along the whole culm, 10–25 cm long, the basal and upper foliar leaves with shorter blades than the middle ones; sheaths 5–15 cm long, with a distinct membranaceous margin terminating in two involute auricles; blades 1–1.5 mm diam., round or slightly flattened in cross section, hollow and cross septate.

Inflorescence a decomposed anthela, 3–8 × 2–4 cm, of 10–30 flower heads, these semi-globose or conical, 4–6 mm diam., 10–15 flowered, castaneous, the ultimate head-bearing branches 0.2–0.3 mm thick. Lower inflorescence bract up to 8 cm long, with a foliar blade, this round in cross section and with transverse septa, or only 3–4 cm long and with the blade reduced to a small acicular appendage; upper bracts much smaller; floral bracts 1–2 mm long, membranaceous. Tepals subequal, 2–2.5 mm long, lanceolate, acute, the outer ones V-shaped in cross section, inner ones flat. Stamens six, 1–1.5 mm long; filaments linear; anthers oblong, ca. 0.3 mm long, about 1/3 as long as the filaments. Capsules 2–2.5 × 1–1.5 mm, obovoid, acuminate to short-beaked, about as long as the tepals, keeled along the sutures, castaneous, unilocular. Seeds 0.4 × 0.2 mm, ellipsoid, apiculate, reticulate, yellow-brown.

This new variety agrees with *J. liebmannii* var. *liebmannii* in all characters except for the inflorescence, which is divided into 10–30 distinct flower heads. In the typical variety the inflorescence is divided in two subequal parts with the flowers arranged diffusely in 2–3-flowered glomerules but not in distinct heads.

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